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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/127,341	07/31/1998	MICHAEL DEADDIO	11021.0001	9998

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FELTEN, DANIEL S

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 07/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/127,341	Applicant(s) DeAddio et al
Examiner Daniel Felten	Art Unit 3624

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Nov 7, 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 12-19 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) Other:

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DETAILED ACTION

1
2 1. Receipt of the amendment filed November 7, 2001 canceling claims 1-10 is
3 acknowledged. No amendment has been made to claims 11-19. Claims 11-19 remain pending in
4 the application and are presented to be examined upon their merits.

5

6

7 *Information Disclosure Statement*

8
9 2. The examiner has considered the missing cited references in the Information Disclosure
10 Statement (IDS) submitted April 1, 1999 that were not made of record in the previous office
11 action mailed May 7, 2001. A copy of the IDS has been made available with this office action
12 reflecting the aforementioned corrections.

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Response to Arguments

3. Applicant's arguments filed November 7, 2001 have been fully considered but they are
4 not persuasive. The 102(b) rejection of claims 11-15 is maintained. Although the Kapital system
5 tends to focus on the versality of construction of what the author calls, "exotic tradable
6 instruments", The examiner respectfully requests that the applicant read the Pawson article again,
7 where it says the following:

9 *"...Using Kapital, traders can choose the user interface that suits them from simple business forms to
10 graphical representations. They can perform powerful financial analytics using complex mathematical
11 models. Kapital accommodates real-time data feeds giving current market information and performs
12 sophisticated portfolio analysis (suggesting processing of more than one financial instrument) against
13 a variety of market assumptions." (see Pawson, col. 1, page 41)*

15 The Pawson article disclosure is not limited to single financial instruments, but suggests
16 performance of analysis on a portfolio of financial instruments within the portfolio. Thus the
17 Kapital system is not limited to individual financial instruments as is suggested by the applicant.

19 Regarding 103(a) Rejections:

20 References, in determining obviousness are not read in isolation but for what they fairly
21 teach in combination with prior art as a whole, and thus patent assignee's reference-by-reference
22 attack on prior art to demonstrate non-obviousness is not persuasive (Photoelectric sensing
23 system) Banner Engineering v. Tri-Tronics Co. Inc., 29 USPQ 1392 1389 (CAFC 1993unpub)
24 citing in re Merck, 231 USPQ 375 (CAFC 1986).

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1 References are evaluated by what they suggest to one versed in the art, rather than their
2 specific disclosure [see In re Bozek, 163 USPQ 545 (CCPA 1969)]. In this case, the primary
3 reference shows an object oriented system for manipulation of a financial instrument. The
4 secondary reference shows a transversal process as applied to a C++ tree iterator. The 35 U.S.C.
5 103 rejection set forth above provide reasoning for the combinations of references and resolve
6 the level of ordinary skill in the business method art.

7 In response to applicant piecemeal analysis of the references, the examiner respectfully
8 submits that one cannot show non-obviousness by attacking references individually where, as
9 here, the rejections are based on combination of references. Specifically, the applicant discusses
10 that the Klecker references teach away from the claimed invention. These deficiencies of the
11 reference, Kleckner, were addressed in the first Office Action dated May 7, 2001 and are
12 addressed identically in this action. Both actions discuss the Klenckner reference failing to teach
13 the claimed generic traversal process and how it would be modified by the secondary reference.

14

15 ***Claim Rejections - 35 USC § 103***

16 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
17 obviousness rejections set forth in this Office action:

18 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
19 section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
20 such that the subject matter as a whole would have been obvious at the time the invention was made to a person
21 having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the
22 manner in which the invention was made.

23

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1 5. Claims 11 to 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleckner
2 et al (WO 94120912), published on September 15, 1994, and further in view of
3 Rasala.

4 Kleckner discloses an object oriented system for manipulating a financial instrument.

5 Rasala discloses iterator and the traversal process as applied to the C++ programming in "A
6 Model C++ Tree Iterator Class for Binary Search Trees" in the Proceeding of the 28th SIGCSE
7 technical symposium on Computer Science Education in March 1997.

8

9 **Claim 11.**

10 A system comprising data processing means wherein a generic traversal process is employed that
11 can be applied to the macro structure of a financial instrument to implement one or more
12 functions that produce results based on this information.

13 Kleckner discloses a system for creating, structuring, manipulating and evaluating a
14 financial instrument using C++ on the top of page 10. Kleckner does not specifically disclose a
15 traversal process. Rasala discloses this traversal process as part of a tutorial for college computer
16 science students as shown on page 72 and 76. Since Kleckner uses C++ to implement the system
17 and the traversal process is inherent in the functionality of C++, it would have been obvious to 5.
18 add this to Kleckner's invention.

19

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1 Claim 12.

2 The system of claim 11, wherein each said function is implemented as a specific extension of
3 said generic traversal process to generate a specified type of result.

4 Kleckner discloses a system to generate a specific type of result in Fig. 8 and starting on
5 page 18, lie 22. Kleckner does not specifically disclose a traversal process. Rasala discloses this
6 traversal process as part of a tutorial for college computer science students as shown on page 72
7 and 76. Since Kleckner uses C++ to implement the system and the traversal process is inherent in
8 the functionality of C++, it would have been obvious to add this to Kleckner's invention.

9

10 Claim 13.

11 The system of claim 12, wherein each traversal process is based on a well defined interface
12 between the financial events contained in the financial event structure of a financial instrument
13 and said traversal process.

14 Kleckner discloses a system to generate a specific type of result in Fig. 8 and starting on
15 page 98, lie 22. Kleckner does not specifically disclose a traversal process. Rasala discloses this
16 traversal process as part of a tutorial for college computer science students as shown on page 72
17 and 76. Since Kleckner uses C++ to implement the system and the traversal process is inherent in
18 the functionality of C++, it would have been obvious to add this to Kleckner's invention.

19

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1 Claim 14.

2 The system of claim 13, wherein the action to be performed for each type of financial event is
3 defined, in said specific traversal process, independently from the action for any other type of
4 financial event.

5 Kleckner discloses a system to generate a specific type of result in Fig. 8 and starting on
6 page 98, lie 22. Independence is shown on page 4, line 39. Kleckner does not specifically
7 disclose a traversal process. Rasala discloses this traversal process as part of a tutorial for college
8 computer science students as shown on page 72 and 76. Since Kleckner uses C++ to implement
9 the system and the traversal process is inherent in the functionality of C++, it would have been
10 obvious to add this to Kleckner's invention.

11

12 Claim 15.

13 The system of claim 13, wherein the overall result of applying a function specific traversal
14 process to the financial event structure of a financial instrument is a combination of applying all
15 individual financial actions to the respective financial events in a prescribed way.

16 Kleckner discloses a system to generate a specific type of result in Fig. 8 and starting on
17 page 98, lie 22. Figure 6 shows the combination of applying all individual financial action in a
18 prescribed way. Kleckner does not specifically disclose a traversal process. Rasala discloses this
19 traversal process as part of a tutorial for college computer science students as shown on page 72
20 and 76. Since Kleckner uses C++ to implement the system and the traversal process is inherent in

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1 the functionality of C++, it would have been obvious to add this to Kleckner's invention. 10.
2 Claims 16 to 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klechner and
3 Rasala as applied to claim 11 above, and further in view of Gould. Gould discloses double
4 dispatch for use in C++ programming in "Double Dispatch with an Inverted Visitor Pattern" in
5 the May 1998 edition of CIC++ Users Journal.

6

7 **Claim 16.**

8 The system of claim 11, wherein said traversal process is implemented via a double dispatch
9 mechanism. Klechner and Rasala disclose a financial instrument system with a traversal process,
10 but does not disclose double dispatch. Gould discloses double dispatch using C++ and gives code
11 to add this to a C++ program. This addition is an extension of the single dispatch functionality
12 inherent in the C++ language as shown in the first paragraph of page 67. The addition of this
13 functionality would be obvious to allow for more elegant and thus less costly programming.

14

15 **Claim 17.**

16 The system of claim 16, wherein said double dispatch mechanism selects the appropriate action
17 for each financial event without predetermined knowledge of the over all referential structure of
18 the financial event structure.

19

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1 Claim 18.

2 The system of claim 16, wherein a nested double dispatch mechanism initiated inside the action
3 for a given financial event can select the appropriate action for any financial event referred to
4 locally within the financial event.

5

6 Claim 19.

7 The system of claim 18 wherein said nested double dispatch mechanism can be applied
8 recursively to any level.

9 For Claims 17 to 19, Klechner and Rasala disclose a financial instrument system with a
10 traversal process, but does not disclose double dispatch. Gould discloses double dispatch using
11 C++ and gives code to add this to a C++ program. The functionality given in the above claims
12 are inherent to the double dispatch operation or are inherent to an object-based financial
13 instrument system. For example, the functionality of object oriented programming assumes no
14 predetermined knowledge of the actions as disclosed in Claim 97. Nested functions and recursive
15 functions are common in iterative programming as disclosed in Claims 18 and 99.

16 This addition is an extension of the single dispatch functionality inherent in the C++
17 language as shown in the first paragraph of page 67. The addition of this functionality would be
18 obvious to allow for more elegant and thus less costly programming.

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ***Daniel S. Felten*** whose telephone number is (703) 305-0724. The examiner can normally be reached between the hours of 7:00AM to 5:30PM Monday-Thursday. Any inquiry of a general nature relating to the status of this application or its proceedings should be directed to the Customer Service Office (703) 306-5631, or the examiner's supervisor ***Vincent Millin*** whose telephone number is (703) 308-1065.

7. Response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

for formal communications intended for entry, or (703) 305-0040, for informal or draft communications, please label "Proposed" or "Draft".

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to *[daniel.felten@uspto.gov]*.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly

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1 set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and
2 Trademark on February 25, 1997 at 1 195 OG 89.

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6 DSF

7 July 15, 2002

VINCENT MILLIN
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